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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

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In the Matter of	)	WC Docket No. 11-42
	)	
Lifeline and Link Up Reform and Modernization	)	
	)	
Telecommunications Carriers Eligible for Universal Service Support	))	WC Docket No. 09-197
	)	WC Docket No. 10-90
Connect America Fund	)	
	)	
	)	

COMMENTS OF THE NATIONAL DIGITAL INCLUSION ALLIANCE

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August 31, 2015

The National Digital Inclusion Alliance (NDIA) respectfully submits these comments in response to the Second Further Notice of Proposed Rulemaking (NPRM) on reform and modernization of the FCC's Lifeline program.

We are leaders of local community organizations, public libraries, towns and other institutions working hard to reduce digital disparities among our neighbors. To improve the daily lives of all community members, we call for digital inclusion public policies that reflect our expertise and diverse experiences.

Our approach is based in the knowledge that broadband adoption is most effectively promoted by community-driven efforts combining:
- Affordable home broadband service.
- Public broadband access.
- Locally trusted technology training and support.

The National Digital Inclusion Alliance represents organizations with a wide range of experience reducing the digital divide in the United States. The experiences of our 100+ affiliates include providing guidance to low-income parents connecting to their children's teachers, to seniors learning how to use their electronic health record, to veterans learning digital skills in order to acquire a job and to disabled adults participating more fully in their communities. The services of our affiliates include digital literacy training, public Internet access, home broadband programs and digital inclusion advocacy.

NDIA currently counts 114 affiliated organizations, including 20 national nonprofits and 79 local organizations located in 27 states and the District of Columbia. Among our local affiliates are forty-eight community-based nonprofits, eleven local library systems, eight cities, six university-based programs, four state agencies and one local school district. We also count nine US businesses and six international NGOs as affiliates. The full list of NDIA affiliates with links to their websites can be found at http://www.digitalinclusionalliance.org/members/.

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Section I – Principles

NDIA agrees that broadband Internet service should be a supported service in the Lifeline program.

NDIA encourages the Commission to address all three barriers to broadband adoption in this proceeding, and to recognize that local agencies and organizations are on the frontlines of broadband adoption.
The three barriers to broadband adoption of cost, digital skills and relevance are well documented. We appreciate the attention to the necessity of low-cost broadband options. We have learned through experience broadband adoption is most effectively increased by community-driven efforts that combine affordable home broadband service, public broadband access and locally trusted technology training and support. If we, as a country, are to successfully increase Internet access and meaningful use, we must integrate low-cost broadband offers with on-the-ground training and support that effectively tackle all three barriers.

NDIA encourages the Commission to recognize that community-based low-cost broadband is an important strategy to address the cost issue.
In the absence of low-cost commercial broadband service, community anchor institutions, schools, non-profit organizations and municipalities are crafting innovative local solutions. The FCC should take these community-based solutions into account in its proposed modernization of Lifeline. If the FCC were to develop an understanding of community-based broadband service programs, it could consider mechanisms by which these alternatives to commercial service could qualify for support from the Lifeline program's $9.25 monthly subscriber household subsidy. One possibility would be for the FCC to establish an application, implementation and reporting process by which community-based solutions for low-cost broadband service participate as providers of Lifeline broadband service.

Section II – Comments on Notice

Paragraph 7
Household Internet access via a wireless provider is most supportive of all members of the household if the service is distributed beyond a singular mobile phone.
We agree with the Commission that broadband access via a mobile device is not enough to participate fully in today's digital society. Lifeline broadband service via a cellular connection is most useful to all the residents of the household if it is a hotspot device or a mobile phone that easily allows for tethering by other devices.

Paragraph 17
We recommend the Commission incentivize Lifeline broadband providers to provide training and support through community partnerships while also encouraging other Federal agencies and stakeholders to advance meaningful uses by leveraging Lifeline broadband.

The Commission's goals for Lifeline Modernization include not just more access to the Internet for low-income households, but meaningful social and economic outcomes of that access in the areas of

education, health care, public safety, and improved opportunities for low-income disabled Americans.

Affordable broadband access is necessary, but not sufficient, to produce those desired outcomes.

In his June 2014 report entitled "Digital Readiness"[1], John Horrigan makes a critical distinction between the traditional "digital divide" -- the number of Americans who lack advanced Internet access -- and the phenomenon of "digital [un]readiness", i.e. the much larger number who do have advanced access but lack the skills to make meaningful use of it. In national survey research conducted for the Joint Center for Political and Economic Studies, Horrigan found that:

- *29% of adult Americans have low levels of digital readiness, as measured by respondents' understanding of terms about the Internet and self-reported confidence in using computers or finding information online.*
- *Digital readiness is a bigger problem than the digital divide. Some 18% of Americans lack "advanced Internet access," that is, either broadband at home or a smartphone; 15% are not Internet users at all. Put differently, 70 million Americans are not "digitally ready" for robust online use, nearly twice the number (36 million) of people with no online access.*
- *Lack of digital readiness afflicts one in five Americans who have advanced online access. Although non-Internet users necessarily lack digital readiness, 18% of people who have broadband or a smartphone register low levels of digital readiness. These Americans – possessing the tools but deficient in skills – exhibit far lower levels of Internet use.*

In other words, ready access to broadband services for the vast majority of Americans at all income levels except the poorest has not, by itself, prepared all those connected people to function effectively online.

Another Horrigan study sheds light on this access vs. skills question from a different angle. *Deepening Ties[2]* is based on the second of two surveys of Comcast Internet Essentials participants conducted in 2014 by Princeton Survey Research Associates, with funding from the Comcast Research and Development Fund. Horrigan writes:

> The most significant finding in Deepening Ties *is the very large impact formal training has on digital literacy or the attainment of concrete Internet skills. Those who receive formal training from an IE program, library, or other institution (as opposed to informal assistance from family or friends) were significantly more likely to use the Internet to pursue economic opportunities and cultivate social ties. Those who received formal training were 15 percentage points more likely to use the Internet to look for a job, 14 percentage points more likely to use it to access government services, and 12 percentage points more likely to use it to connect with family and friends.*

In other words, giving a low-income family access to cheap Internet service is significantly more likely to result in meaningful use of that service if accompanied by formal training in basic skills to enable that use. This should not come as news to anyone. Effective community digital inclusion

[1] John B. Horrigan, PhD., *Digital Readiness: Nearly one - third of Americans lack the skills to use next - generation "Internet of things" applications*, June 2014 (available at http://jbhorrigan.weebly.com/uploads/3/0/8/0/30809311/digital_readiness.horrigan.june2014.pdf)

[2] John B. Horrigan, PhD, *Deepening Ties*, January 2015 (available at http://techfund.xfinity.com/images/comcast-ie-report-2-horrigan.pdf)

initiatives always combine affordable access (and affordable equipment) for digitally inexperienced residents with basic skills training and support from local, trusted entities.

In paragraphs 30-31 the FNRPM refers to its *own Low Income Broadband Pilot Program Staff Report* [3] and seeks "comment on how this report and the underlying data will provide guidance to the Commission as it considers reforms to the Lifeline program." The report reviews fourteen pilot broadband adoption efforts proposed and operated by ETCs, and designed as experiments in addressing all three of the "major barriers to adoption—cost, relevance and digital literacy", which the report characterizes as "intertwined". However, only three of the fourteen pilots list the effect of digital literacy training on adoption and/or price elasticity as a "key question"; only two appear to have created partnerships with established local nonprofit training organizations (Virgin in Ohio, Frontier in Ohio and Parkersburg WV); and none appear to have investigated new adopters' intended or actual uses of broadband (the "relevancy" issue).

The report notes: *"… [R]equiring ETCs to offer or provide digital literacy training does not appear to be an efficient or effective model for converting non-adopters to adopters. Participating consumers generally had little interest in training provided by the ETCs. This raises the question of whether other organizations specializing in digital literacy training may be more successful at such training."*

NDIA commends the Commission for undertaking the Pilot Program, but would caution against giving undue weight to its limited results. We note that the U.S. Department of Commerce's Broadband Technology Opportunities Program (BTOP) succeeded in motivating hundreds of thousands of disconnected low-income Americans to become new home broadband subscribers between 2010 and 2013. BTOP sponsored a variety of community-based and collaborative projects which typically addressed all three of the Commission's "intertwined major barriers": i.e. they addressed the **cost** of home subscriptions and equipment; they provided basic **digital literacy** training; and they designed their programs to associate digital literacy and access with immediately **relevant** personal technology uses such as job search and training, education, health care, civic leadership, etc. We suggest that learnings and data available from the many successful BTOP projects would be at least as useful to the Commission in this proceeding as the Pilot Program results.[4]

Affiliates of NDIA have managed or served as major partners in some of the nation's most effective low-income adoption programs, including National Telecommunications and Information Administration's (NTIA's) Broadband Technology Opportunities Program (BTOP) Sustainable Broadband Adoption (SBA) and Public Computing Centers (PCC) projects at the multi-state, statewide and local levels; long-running public library digital literacy training and access programs; collaborative efforts led by city governments and universities; and programs maintained by community-based nonprofits large and small.

Here's what we know from this experience: For less educated, older and poorer Americans who lack both the resources and the skills to become effective Internet users, getting to digital literacy and meaningful Internet use generally requires…
  1. affordable broadband access,
  2. affordable equipment,

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[3] Wireline Competition Bureau, *Low Income Broadband Pilot Program Staff Report*, WC Docket No. 11-42, May 22, 2015

[4] A broad array of BTOP Sustainable Broadband Adoption and Public Computer Center project information is available through http://www.ntia.doc.gov/category/broadband-technology-opportunities-program.

3. friendly hands-on basic skills training, and
4. ongoing support from community, friends and/or family.

At $9.25 per month per household, the Commission will be hard pressed to provide eligible households the first of these essential ingredients through the Lifeline program, let alone the other three.

The Commission should do what it can to leverage the potential of hundreds of millions of dollars in Lifeline broadband payments to engage providers in partnerships that help their new customers get access to training and equipment. After all, the faster they become adept with the technology, the sooner many of these customers are likely to trade up to faster, more expensive broadband services.

The Commission must also acknowledge that Lifeline-supported broadband access will be just a first step toward the vision of digital inclusion and empowerment outlined in the FNPRM. The impact of that first step will be immensely greater if it brings the nation closer to a comprehensive, long-term strategy for digital inclusion, rooted in local communities, that supports all of the ingredients needed to make it happen -- affordable access, affordable equipment, training and support.

Such a strategy doesn't exist now, and it won't be developed or implemented without strong, determined, consistent public leadership. At the national level, that leadership should come from the Commission, which more than any other Federal agency is responsible for pursuing the goal of universal broadband Internet access.

We encourage the Commission to:
1. Make basic digital skills training and support, including collaboration with community providers, a competitive advantage and/or qualification for participation in any Lifeline broadband initiative, either as a traditional ETC or as a non-traditional or innovative provider.
2. Take the lead to convene appropriate U.S. agencies with digital inclusion practitioners and other stakeholders to develop plans (with resources) to leverage Lifeline broadband access with community training and support to advance meaningful uses that are important to the respective agencies, including but not limited to:
   • The Department of Health and Human Services and Centers for Medicare and Medicaid Services with respect to Patient Health Record adoption (see comments on Paragraph 27, below)
   • The Department of Justice with respect to community safety applications
   • The Treasury Department, Consumer Financial Protection Bureau, Federal Trade Commission and Federal Reserve with respect to online financial services, financial literacy and Internet safety
   • The Departments of Labor and Commerce with respect to workforce readiness
   • The Department of Education with respect not only to the K-12 concerns outlined in the FNPRM, but also to adult education including GED preparation.

Paragraph 26
Broadband purchasing awareness programs are most successful when they speak directly to a target population and are created and implemented in partnership with a local trusted organization.
A thoughtfully constructed and implemented broadband purchasing awareness program can significantly increase the positive impact of Lifeline on low-income consumers. Lifeline providers should work cooperatively with local broadband adoption programs to create and implement broadband purchasing awareness programs that speak directly to the target population. The National Telecommunications and Information Administration's (NTIA's) Broadband Technology Opportunities Program (BTOP) taught us broadband awareness programs are most successful when constructed in cooperation with local trusted community-based organizations. The BTOP project Smart Communities Chicago (led by the City of Chicago in partnership with the local Initiative Support Corporation [LISC]) engaged a marketing firm to develop their awareness campaign. The firm met with leaders of local community-based organizations resulting in print materials and bus and rail ads[5] that featured personal stories of local residents impacted by broadband access and digital literacy training. In the NTIA Broadband Adoption Toolkit[6], Dionne Baux, Program Office of LISC provided the following quote, "We understand the importance of working with government and the philanthropic community, but there is an equally important need to hear the voice of community leaders to ensure opportunities that are available meet real needs of the residents."

Regional digital inclusion coalitions can be valuable partners of the Commission and Lifeline broadband providers. We are seeing more and more cities recognize the necessity of coordinating regional efforts to increase broadband access and use. As a starting point, the Commission could reach out to municipalities coordinating and/or financially supporting digital inclusion efforts.

Paragraph 27
Lack of broadband access is a major obstacle to low income households' adoption of Personal Health Record (PHR) tools. We recommend the Commission work coopertively with the Department of Health and Human Services and the Centers for Medicare and Medicaid Services to maximize the impact of a Lifeline broadband option on low-income PHR adoption.

In addition to direct telehealth (remote care) and patient self-monitoring and self-management applications mentioned in the NPRM, affordable broadband access is a prerequisite for low-income households' use of their providers' Personal Health Record tools (PHRs). This should be an important consideration for the Commission in assessing the potential impact of Lifeline modernization on public health. The lack of home Internet service of any kind in more than half of U.S. households with incomes below $20,000 (as reported by the 2013 American Community Survey among others) stands directly in the way of efforts by hospital systems, community health clinics, and the Centers for Medicare and Medicaid Services (CMS) to promote the use of PHRs by Medicaid and low-income Medicare patients, as an essential element of ensuring "meaningful use" of Federally subsidized Electronic Health Records systems.

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5   Photo Stream of Smart Communities Chicago Facebook Page. (Last visited August 20, 2015) https://www.facebook.com/SmartCommunitiesChicago/photos_stream.
6   National Telecommunications & Information Administration, NTIA Broadband Adoption Toolkit. 2013. (Last visited August 21, 2015.) http://www2.ntia.doc.gov/files/toolkit_042913.pdf

PHR applications (sometimes called, more accurately, "patient portals" or "personal health management apps") are the consumer-facing portions of healthcare providers' Electronic Health Records systems. Typically available to an enrolled patient through secure login at the provider's website, a PHR such as Epic Systems' "MyChart" provides not only access to test results and other record information, but also online appointment scheduling, prescription renewal, patient self-education resources from trustworthy sources, and email communication with doctors and nurses.

To continue to receive enhanced reimbursements from CMS' Medicaid and/or Medicare EHR Incentive Programs, healthcare providers must enlist large numbers of low-income and/or elderly patients to create and use their PHR accounts. The CMS reimbursement incentives are especially important for safety-net hospital systems and community health clinics, many of which which have added large numbers of Medicaid patients under the Affordable Care Act. Unfortunately, poorer and older residents are exactly the groups least likely to have computers, home Internet access or even reliable smartphones. [7]

Providers have important reasons other than federal reimbursement to encourage their low-income patients to use their PHRs: Less patient time wasted in waiting rooms and call-waiting queues, less staff time and paperwork wasted on routine tasks like prescription renewal, more efficient appointment scheduling, and a convenient system for communicating test results, care reminders, questions and answers. In addition, some providers now use their PHR platforms to conduct patient surveys or support active telehealth applications. These administrative advantages and clinical tools are as valuable for improving care and outcomes for low-income patients as for those who are better-off and better-connected.

Unfortunately, the persistent gap in home broadband access and digital literacy for low-income households mean that: a) significantly lower percentages of Medicaid patients are enrolling as early PHR adopters than are patients with private insurance, and b) in many communities there is a hard

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[7] *An example:* MetroHealth is a large safety-net hospital system serving Cleveland and Cuyahoga County, Ohio. The system saw about 300,000 individual patients between January 2012 and May 2015. 58% were either covered by Medicaid or were uninsured. Only 30% had commercial insurance coverage.

The 2013 American Community Survey showed that Cleveland remains one of the nation's poorest big cities, and also one of the worst-connected; 41% of the city's households had incomes below $20,000, and only 37% of those sub-$20,000 households reported having any kind of home Internet subscription (including mobile). Separately, a countywide phone survey commissioned by OneCommunity's Connect Your Community Project, and carried out in October 2012, found the percentage of fixed home broadband users among Medicaid clients to be only 42% countywide, and just 38% in the city of Cleveland and adjacent lower-income suburbs.

A recent analysis of MetroHealth's 75,000 MyChart users by researchers from the Center for Health Care Research and Policy found that only about 20% of the system's Medicaid-covered patients had logged in, compared to 36% of commercially insured patients. They also found, looking at the percentages of users who engaged in "Common PHR Activities" such as reading messages, viewing lab results, checking allergies and requesting advice, that "Medicaid and uninsured patients had noticeably lower levels of use across all categories". The researchers characterize this pattern as "An Emerging Inequality", and comment that "Differences in the uptake and use of PHRs could increase or exacerbate health disparities."

MetroHealth's Chief Informatics Officer, Dr. David Kaelber, expanded on this concern in a June 10, 2015 letter to the Broadband Opportunity Council: "*MetroHealth can already see Cleveland's economic digital divide reflected in our MyChart user data... There is good reason for concern that this disparity may widen, as continuing efforts to add MyChart users run up against the limited supply of lower-income patients who are actually able to respond."*

ceiling on PHR adoption by low income households, because half or more have no broadband access, fixed or mobile.

We encourage the Commission to:
1. Identify the effective use of current and future Personal Health Record applications, including effective user access to data, documents and media, as one of the benchmarks for establishing its minimum standards for speed, bandwidth and device capabilities that would be supported by any Lifeline Internet subsidy.
2. Invite appropriate officials of the Department of Health and Human Services, including the Centers for Medicare and Medicaid Services, to join with FCC staff and other concerned parties to discuss how these agencies might coordinate efforts to maximize the impact of a Lifeline broadband option on low-income PHR adoption -- for example, through support for community marketing and consumer training initiatives.
3. In establishing criteria for approving innovative or non-conventional Lifeline broadband providers, give weight to the proposed provider's ability and intent to provide training in support of PHR adoption.

Paragraph 29
Local resilient broadband networks can be a valuable public safety tool. We recommend local resilient broadband networks be considered as a Lifeline broadband provider.
We support the Commission's call for increased provider participation in Wireless Emergency Alert (WEA) systems; however, especially in cases where network outages may cause system-wide failures among commercial cellular networks (as, for example, during the Boston Marathon bombing in 2013 and Superstorm Sandy in 2012), Lifeline service offerings can also facilitate additional public safety capability. In past emergencies, local broadband networks have provided the opportunity for local communities to organize to bring much-needed aid to residents. For example, during Superstorm Sandy, Occupy Sandy and neighborhood organizations such as the Red Hook Initiative in New York City were able to organize volunteers, share status alerts, and collect donations on social media and web platforms using broadband connections, even while commercial cellular networks were down.

Occupy Sandy's savvy use of social media and local broadband to organize response efforts was highlighted in a September 2013 report[8] from the Department of Homeland Security, "The Resilient Social Network," which informed the development of FEMA's Whole Community Approach[9]. This framework reinforces the fact that FEMA is only one part of our nation's emergency management team -- and that NGOs, faith-based and non-profit groups and the private sector, as well as individuals, families, and communities, "continue to be the nation's most important assets as first responders during a disaster." Persistent, reliable, and locally maintainable broadband resources -- especially in coordination with community anchor institutions and local digital volunteers -- are an important source of grassroots emergency response capability. We encourage the Commission to consider expansion of Lifeline providers beyond ETCs and to integrate locally tailored broadband distribution systems that enable residents to plan for resilience.

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8   *The Resilient Social Network.* Homeland Security Studies and Analysis Institute. Prepared for Department of Homeland Security Science and Technology Directorate. September 30, 2013.
        http://homelandsecurity.org/docs/the%20resilient%20social%20network.pdf
9   *Whole Community*. FEMA. (Last visited August 27, 2015.) http://www.fema.gov/whole-community

Paragraph 33
Due to the necessity of everyone in the household using a Lifeline broadband connection, we recommend the Commission not allow Lifeline support of filtered connections.
Paragraph 33 in the Notice references Kajeet, an organization that a low-cost broadband subscription and hotspot device to schools who then distribute the hotspots to low-income students. Currently, Kajeet's service includes filtering. We recommend the FCC not allow Lifeline support of filtered connections. Since Lifeline subsidies are one per household, if the connection is targeted to the student, parents may have trouble using the Lifeline broadband connection to apply for jobs or research medical issues.

Paragraph 44
Requiring multiple Lifeline broadband services from each provider will aid households choosing a Lifeline broadband service that meets their needs.
Lifeline broadband providers should be required to allow a qualifying customer to apply the Lifeline discount to any voice, broadband, or bundled offering that is above a minimum speed. Requiring multiple Lifeline broadband offerings recognizes the needs of households vary. The broadband needs of a single individual is much different from a household with multiple adults and children. Some families with multiple needs may favor higher capacity service, others may value mobility. However, while a low-income family's use of broadband may vary, the question of affordability for these families is a constant.

Paragraph 52
Locking in the $9.25 subsidy as permanent is premature at this early stage of the modernization of Lifeline.
We recommend the Commission not set the $9.25 subsidy amount as permanent. Wireline broadband is roughly twice as expensive as telephone service. It is premature to lock in this amount of funding while the broadband market is still changing and the Lifeline program is just beginning to support broadband. The Commission should explore the costs of broadband service and the impact on low-income consumers before making a final decision.

We also recommend providers receive a higher subsidy for providing a combined voice+data plan, above the $9.25. $9.25 is already a low subsidy for broadband. A bundle of both services at $9.25 is not realistic.

Paragraph 54
Because there are multiple costs associated with establishing home Internet service accessible to more than one person in the household, we recommend the Commission cover the broadband connection charge for wireline service.
Consider the various costs associated with establishing home Internet service - installation fee, modem rental fee, and router purchase. Some providers have modem/router combo devices but many do not. The cost of the router can be a deterrent to home access. By covering the installation fee, the Commission is reducing one of the cost-related barriers.

Paragraph 61
Clearly, we agree broadband should be a supported service in the Lifeline program.

Paragraphs 64-80, 86-89

A National Verifier should work directly with community-based organizations in order to empower those organizations to be strong ambassadors for the Lifeline program.

NDIA represents over 100 community-based organizations that, on a daily basis, directly interact with broadband non-adopters and low-income families. These organizations are on the front lines in closing the broadband adoption gap, and as the Commission re-invents the Lifeline program, it should seek to enable these organizations in developing innovative solutions. Most importantly, the Commission should actively recruit public assistance agencies, community-based organizations, libraries, and community centers into becoming effective ambassadors for Lifeline by giving them the tools to serve disconnected populations.

In particular, in establishing the national verification process, the Commission should ensure that community-based organizations have access to the national verification and accountability database, so that they can be part of the application process for a qualifying individual.

Many of the organizations NDIA represents perform similar functions for other federal and state public assistance programs -- be it help in enrolling adults in the food stamps or school lunch program, Medicaid, obtaining workforce training benefits, disability or VA benefits. This would be the most effective time for community-based organizations and assistance programs to educate and inform a constituent about Lifeline benefits. Community organizations are in a position to coordinate and bundle Lifeline benefits with other services, such as digital literacy training programs and workforce skill development.

As a result, NDIA suggests that in creating a national verification and accountability process, the Commission should require that the neutral, third-party vendor selected to perform those tasks undertake the following:

1. Provide state and local agencies, community anchor institutions and community-based organizations with a confidential method of "pre-qualifying" a potential applicant for Lifeline benefits, including both web-based and call-center functions. Because community-based organizations are likely to encounter potentially qualifying applicants in a wide variety of settings (from soup kitchens, to churches, to shelters), this functionality should be made available through both a desktop and a mobile application.
2. Provide state and local agencies and other community organizations a web-based portal for tracking the final qualification and enrollment of individuals that the organization brought to the system. This type of access would help ensure that service to certain vulnerable individuals does not "fall through the cracks".
3. Establish a permanent and regularly-meeting "user group" that includes state and local assistance agencies, community-based organizations and non-profits. This user group would be tasked with providing ongoing feedback to the national, third-party verifier that the tools and processes it is using are meeting the current needs of these organizations. One inherent challenge of contracting with an independent third-party income verification provider is that the "customer" of that "national verifier" (the Commission) is not necessarily the day-to-day "user" of that provider's services. There needs to be a mechanism to identify and correct challenges such as an ill-designed, clunky web interface or an understaffed call center. In addition, needs will change over time, and a strong user group can provide an institutional means of making sure that the third-party vendor is taking the needs of key, community-based users into account.
4. Before selecting the vendor and, in the future, renewing the vendor's contract, the Commission should directly and publicly seek the input of state and local agencies and community-based organizations on the vendor selection process.

Paragraphs 129-141
Community-based solutions for low-cost broadband service should be designated as providers of Lifeline broadband.
In the absence of low-cost commercial broadband service, community anchor institutions, nonprofit organizations and municipalities are creating local Internet access solutions. The Commission should take these community-based solutions into account as alternative solutions in its proposed modernization of Lifeline.

If the Commission were to develop an understanding of community-based broadband service programs, the Commission could develop mechanisms by which these alternatives to commercial service could qualify for support from the Lifeline program's $9.25 monthly subscriber household subsidy. One possibility would be for the Commission to establish a non-ETC application, implementation and reporting process for community-based solutions of low-cost broadband service participate as providers of Lifeline broadband service. Community anchor institutions, schools, non-profit organizations and municipalities touch the lives of low-income populations every day, and those entities are frequently in the best position not only to educate potential applicants about the program but also to provide them service.

The methods in which community institutions assist low-income population are as diverse as the communities served. The community-based solutions range from direct provision of Internet service to partnering with providers. In between the two extremes is a lot of room for creativity and mixed solutions. The Lifeline Program should encourage local community-based solutions by clearly defining a structure for them to participate regardless of legal construct. The Lifeline Program should not force community-based solutions (and providers) into one particular model.

We have explored many of these approaches and believe that most programs can fit within five different models:
1. Direct provision of Internet service through non-ETC commercial provider in partnership with a nonprofit/library/school.
2. Direct provision of Internet service by schools with EBS spectrum.
3. Direct provision of Internet service through a higher education network in partnership with a nonprofit/library/school.
4. Nonprofit/library/school facilitating service through Mobile Beacon or Mobile Citizen.
5. Internet service via a publicly owned network.

The Lifeline program should facilitate and support all of these various methods of providing broadband service to the low-income population. Of the five community-based low-cost broadband solutions we have identified, three are currently distributed models in which the cost of the broadband service is absorbed by the nonprofit/anchor institutions/public utility.

In order to determine how community-based low-cost broadband service could potentially participate in Lifeline, we must understand the variety of solutions that currently exist. Of the five community-based low-cost broadband solutions we have identified, only the publicly owned networks offer phone service. The Commission should allow the Lifeline subsidy to apply to connectivity purchased by a nonprofit/anchor institutions/public utility who then distribute that connectivity to qualifying individuals. A community organization or library can purchase these devices and connectivity in bulk and distribute them on an as-needed basis to targeted, low-income

populations. In the course of a year, one connection could effectively be shared by many low-income individuals for less than $9.25.

In these comments we describe one example for each of the five different solutions.

1. Direct provision of Internet service through non-ETC commercial provider in partnership with a nonprofit/library/school.
   Connecting for Good
   As of August 2015, Connecting for Good, a 501(c)3 organization in Kansas City, has set-up five mesh wifi networks in low-income housing facilities. Four of those are still operational and they are in process of establishing another. They began setting up these mesh networks in 2012. Connecting for Good provides the ongoing maintenance of the networks and technical support to the users. All the networks have gateway connections to the Internet provided by commercial Internet Service Providers via point to point microwave links. Unlike most Internet Service Providers, Connecting For Good's ISPs, KC Wireless and Unified Online, do not restrict bandwidth sharing in their terms of service.

   Thanks to financial donations, Connecting for Good pays KC Wireless $175/month which provides access to the residents of Glanville Towers and Junipers Gardens. If the networks at Glanville Towers and Juniper Gardens were used to capacity (300 users), the cost per user would be $.58 per user per month. Currently, the networks have an average of 100 users per month which calculates to $1.75 per user per month. Posada del Sol and Amethyst Place receive Internet access donated by United Online. For all facilities the bandwidth is free to users. There are no individual signups or subscriptions involved. These four mesh networks handle over 400 users per day. On average, users on the mesh networks receive speeds of 5 MB down and 2 MB up.

   Greater speed can be achieved with larger backhaul capacity, which is more expensive. KC Wireless charges $5.00/month for each additional MB. Connecting for Good's network equipment could handle up to 150 MB. Connecting for Good fundraises to cover the staff cost of maintaining the networks and providing technical support and digital literacy training to users.

   See Appendix A for details on the five networks established by Connecting for Good.

2. Direct provision of Internet service by schools with EBS spectrum.
   Albemarle County Public Schools
   The Albemarle County Public Schools Board, staff, and community believe that the future of public education lies in the effective use of contemporary technologies. Public education must overcome opportunity gaps by providing all learners a seamless capability to conduct research, access information, and communicate at school and in the home. If only schools are connected, those students with home and community access will continue to push ahead of their un-connected peers. Albemarle County Public Schools is defining school as where our students travel with their learning needs and computing devices, not just within the bricks and mortar walls of school buildings.

   Across Albemarle County's 726 square miles, pockets of poverty exist within unconnected urban ring communities including housing projects and large mobile home parks, as well as within the impoverished rural communities in the foothills of the Blue Ridge Mountains and along the James River where broadband is unavailable through either cable or commercial 4G cellular service.

Albemarle County Public Schools has begun closing learning opportunity gaps by using the 2.5 Gigahertz Educational Broadband Spectrum provided by the Federal Communications Commission to public school districts. The technology department completed a small-scale "research and development" pilot of the project utilizing a building mounted antenna on a school. This pilot provided connectivity across an eight-mile radius with speeds averaging 13 Megabits per second. This pilot test was required by the FCC to prove the Division's capability to deliver service through its available spectrum. Albemarle County Public Schools has extended their LTE network to students areas of the county with a high percentage of low to medium income households in rural areas of the county. These geographic areas tend to be mountainous and thus more isolated. The school district's LTE Network is connected to their fiber network which has a POP connection through CenturyLink.

Currently, only select students of Albemarle County Public School have access to the LTE Network through their school issued devices. The LTE Network and the student access is supported by the district's operational budget. Non-students within range of the LTE Network do not have access. With financial support, the Albemarle County Public School could and would extend access to its LTE Network to non-student low-income households within range of the LTE Network.

3. Direct provision of Internet service through a higher education network in partnership with a nonprofit/library/school.
   TFA-Wireless
   TFA-Wireless Network is a collaborative wifi project between Rice University's Department of Electrical and Computer Engineering and Technology For All (a Houston, Texas 501(c)3 nonprofit organization). TFA-Wireless is both a high-speed, free, secure wireless Internet service and a research network. TFA-Wireless serves 22,000 residents in approximately two square miles of the Pecan Park neighborhood in Houston's East End where per capita income averages $10,500. The network is funded by the National Science Foundation.

   The technology of TFA-Wireless is a mesh network that uses "white space" technology from the Rice/TFA tower to infuse the 802.11 mesh network with broadband connectivity. An upgrade is currently underway to to utilize Rice developed white space technology tools for the entire network.

   Because TFA-Wireless is a research network, Technology For All would like to create an overlay that provides a higher quality of service. They would still be using Rice University's Internet as backhaul and use the same towers and antennas but the technology to households would be a more standard mesh network. Technology For All has calculated the cost of a standard mesh network with backhaul from Rice University to be less than $5 per connection per month.

   Technology for All fundraises to provide digital literacy and home computer ownership training to the households using TFA-Wireless and others in the Houston metropolitan area.

4. Nonprofit/library/school facilitating service through Mobile Beacon or Mobile Citizen.
   PCs for People
   Since September 2012, PCs for People, a Minnesota-based nonprofit 501(c)3 organization, has helped 30,000 households at or below 200% of the poverty rate get online. They

provide refurbished computers at little to no cost, help the families choose a low-cost Internet service and provide personal technical support. As needed, PCs for People updates a document of low-cost offers available in the Twin Cities region. Their current flyer of low-cost offers currently available is in the document *Low Cost Internet Resources*, Appendix B.

PCs for People is an organizational partner with both Mobile Beacon and Mobile Citizen. PCs for People distributes devices and manages payments for broadband service via Mobile Beacon and Mobile Citizen. At the peak, PCs for People had 14,000 subscriptions via Mobile Beacon and Mobile Citizen. It was the most popular low-cost broadband service in their constituency. Mobile Beacon and Mobile Citizen were charging $10 per month for unlimited 4G service. (Please see Mobile Citizen's flyer *Low Cost High Speed Mobile Internet,* Appendix C.) PCs for People charges $13.33 for month by month service to cover the administrative costs of managing payments and providing technical support. (Please see PCs for People's flyer *4G High Speed Low-Cost Internet*, Appendix D.)

ISP	Cost/Month	Speed	Equipment Cost	Eligibility
Sprint via Mobile Beacon/Mobile Citizen (Sold by PCs for People)	$10.00-13.33	Varies. Average 3-5MB	$60	Set by PCs for People as 200% of Poverty Rate

Mobile Beacon and Mobile Citizen's low-cost broadband services are a result of an excess capacity agreement with a Clearwire Corporation subsidiary.[10] Both Mobile Beacon and Mobile Citizen are transitioning their service from Clear's 4G WiMAX Network to Sprint's LTE Network.[11] New customers are not being accepted until the transition is complete. As Clear's 4G towers are decommissioned, customers of PCs for People via Mobile Beacon or Mobile Citizen are losing service. During the transition, customers may go without service for an indeterminate amount of time. PCs for People calculates this situation could cause 24,000 students in the Twin Cities region to go without Internet access.

Comparing the current low-cost offerings in the Twin Cities to the Mobile Beacon and Mobile Citizen service, the popularity of the Mobile Beacon and Mobile Citizen service is immediately clear - low monthly cost, low equipment cost and wide eligibility. One of the other reasons the service via Mobile Beacon and Mobile Citizen is so popular is the mobility of the service. Low-income households tend to move often. With a cellular service, families can take the hotspot with them, avoiding an installation charge when they move.

PCs for People's experience selling and supporting Internet access via their partnerships with Mobile Beacon and Mobile Citizen have resulted in the following best practices:

- PCs for People provides 3 months of free service for every new sign up. This offer results in a retention rate of 90%.

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10   Comments of North American Catholic Educational Programming Foundation, Inc. ("NACEPF") in response to the Notice of Proposed Rulemaking (NPRM) WC Docket No. 13-184 on Modernizing the E-rate Program for Schools and Libraries.

11   Sprint LTE Transition. (Last visited August 27. 2015.) http://www.mobilebeacon.org/sprint-forward/

- PCs for People accepts cash payment. Half of their clients are unbanked so it is essential to have store fronts where the clients can pay their Internet bill in cash. (Clients can also choose to pay online, over the phone or in-person.)
- PCs for People does not require a long-term commitment. If a client does not pay for service, the service is temporarily turned off, not terminated. The client can pay the following month and have the service resumed.
- PCs for People provides technical support to all clients, troubleshooting their Internet and computer issues when possible.
- PCs for People holds free computer clean up events quarterly, in addition to providing repairs for $25 regardless of where the computer was purchased.

PCs for People is only one of Mobile Beacon and Mobile Citizen's partners. With over 100 broadband adoption organizations as affiliates, National Digital Inclusion Alliance can definitively say our affiliates rely heavily upon the $10/month wireless Internet service provided via Mobile Beacon and Mobile Citizen. Because the services of Mobile Beacon and Mobile Citizen are impacting broadband adoption in the United States, we encourage the Commission to fully understand the services provided by Mobile Beacon and Mobile Citizen, the legal arrangements between these entities and Sprint and to take any feasible steps to assist in the transition of their services to LTE on a robust basis.

5. Internet service via a publicly owned network.
EPB's NetBridge Student Discount Program
The City of Chattanooga is working with EPB to finalize the NetBridge Student Discount Program, a new initiative aimed at increasing Internet access for pre-K through 12th grade students in the City of Chattanooga. Through EPB's NetBridge Student Discount Program, students who live in the City of Chattanooga and participate in the Free and Reduced Meals program will be eligible for a home connection to America's first community-wide fiber optic network at a significant discount. NetBridge is an effort to increase educational attainment in the community by helping to bridge the digital divide for young people. When more children in the community can utilize America's first community-wide fiber optic network as an educational resource, they have better opportunities for succeeding in school. And, when students achieve more it makes the whole community more attractive to business investment and more able to support the growth of homegrown entrepreneurial ventures.

EPB's NetBridge Student Discount Program offers 100-megabit-per-second Internet service to any household with a student who qualifies for free or reduced-fee lunches for $26.99 a month -- less than half EPB's current rate of $57.99 a month. Approximately 15,200 students will be eligible. EPB launched the program at the beginning of the 2015-2016 school year. EPB's August 10, 2015 press release provides the following details: "The Hamilton County Department of Education (HCDE) will provide validation in a two-step process through September 20. Families must be qualified by HCDE to receive meal subsidies and provide written permission for HCDE to release that information to EPB. EPB is providing HCDE with permission forms, which local public schools will distribute along with the Free and Reduced Meals application for parents to fill out. After the validation

process is complete, EPB Fiber Optics will offer qualified families 100Mbps Internet service for $26.99 per month with no installation fees, contracts or other conditions."[12]

In a corresponding effort, The Enterprise Center is creating a game-plan for increasing digital inclusion among all citizens and to offer everyone the benefits of an increasingly computer and web-based world. A pilot of a digital inclusion program for parents or primary caregivers and their school age children, Tech Goes Home CHA, launched at five public schools and community sites in February, 2015.

In 1935, the City of Chattanooga established EPB as a nonprofit agency to provide electric power to the greater Chattanooga area. Today, EPB serves more than 170,000 homes and businesses in a 600-square-mile area in southeast Tennessee and northwest Georgia. Using a 100% fiber optic network as its backbone, EPB has built a Smart Grid, a next-generation electric system that includes communication capabilities designed to reduce the impact of power outages, improve response time and allow customers greater control of their electric power usage. This same fiber optic backbone is allowing EPB to offer high-speed Internet, TV and phone service to business and residential customers community-wide. In September 2010, EPB became the first company in the United States to offer one gigabit-per-second Internet speed to the entire service territory.

Regarding community-based solutions for low-cost broadband service, we suggest the Commission consider the following:

1. We recommend the Commission determine how best community-based low-cost solutions can participate as non-ETC providers of Lifeline broadband. The five community-based solutions put forth in these comments are all willing to discuss how they can work collaboratively with the Commission as provider of Lifeline broadband service. We encourage the Commission to include both 1.) a community-based solutions in which the connectivity is purchased by a nonprofit/anchor institutions/public utility who then distributes that connectivity for free to qualifying individuals and 2.) connectivity purchased by a nonprofit/anchor institutions/public utility who then receive payment for that connectivity from qualifying individuals receiving the service.
2. We recommend the Commission fully understand the national impact on broadband adoption of low-cost broadband services provided via Mobile Beacon and Mobile Citizen.

Conclusion

In conclusion, we appreciate the opportunity to share our expertise and experience increasing broadband adoption in the United States and we look forward to increased collaboration.

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12   "Enrollment Underway for EPB NetBridge Student Discount Program". EPB Press Release. August 10, 2015. https://www.epb.net/media-relations/news/news_archive/enrollment-underway-for-epb-netbridge-student-discount-program/ (Last visited August 27, 2015.)

Appendixes

Appendix A
Connecting For Good's Mesh Wifi Networks

Their first project was Rosedale Ridge, a Section 8 facility with 168 units and over 400 residents. The residents were mostly single parent families with small children. Connecting for Good supplied the residents with a $125 per month 100 MB point-to-point wireless backhaul that all the residents shared via an on-site outdoor mesh network that reached inside of the apartments. The Internet access was provided free to the residents by Connecting for Good. The cost per household per month was $.31. The facility closed in May 2015 after the city refused to renew its occupancy permit due to the owners neglect of the property.

Glanville Towers is operated by the Kansas City Kansas Housing Authority for low income seniors and disabled individuals. Connecting for Good along provides free Wi-Fi Internet to all 108 apartments in addition to a small PC lab. The residents share a 10 MB wireless connection that costs $175 a month. The microwave backhaul is provided by KCweb (a commercial WISP). The residents receive the Internet access free. The total cost of Wi-Fi equipment investment for this facility was $1200.

Juniper Gardens is a 245 unit multi-building housing complex owned by the Kansas City Kansas Housing Authority, with a high percentage of single parent families with small children and a significant population of recent immigrant families. The KCweb wireless point-to-point backhaul powers 70 Wi-Fi access points covering nearly 12 city blocks and over 40 buildings. The network reaches nearly 1,000 residents. Using older Meraki outdoor equipment, residents get 3-5 MB Internet in their apartments. Initial cost to set up the network was $40,000. Internet access is provided by the same KCweb service used at Glanville Towers.

Posada del Sol is a 60 unit Section 8 property for low income seniors. Commercial provider United Online donates a 100 MB wireless point-to-point broadband connection and Connecting For Good set up an indoor mesh network. The residents receive a solid 25 MB Wi-Fi connec.

Amethyst Place is a 36 unit low-income housing facility operated by a Catholic charity providing housing to low income mothers who have recently completed drug treatment to live with their children. United Online donated a 100 MB wireless point-to-point connection for the training center at 3101 Troost in Kansas City MO. Connecting for Good set up a point-to-point link from 3101 Troost rooftop connects to Amethyst Place. Point-to-point wireless antennas link together five buildings and an indoor mesh network brings Wi-Fi to the Amethyst Place apartments. The residents have access to a solid 50MB Wi-Fi.

Pemberton Park is a 36 unit Section 8 property for seniors who have legal custody of their grandchildren (over 70 children). This project is now in process and will be completed fall of 2015. Still exploring backhaul options, Connecting for Good will probably set up a wireless point-to-point backhaul with indoor wired 802.11ac access points. Point-to-point wireless antennas will connect two buildings to the network. Connecting for Good anticipates 50 MB Wi-Fi to all units. The Kansas City Missouri Housing Authority has agreed to pay up to $150/mo for the backhaul. Connecting for Good will find the maximum bandwidth option for this price.

PCs For People's Low Cost Internet Resources

Low Cost Internet Resources

COMCAST
Internet Essentials

855-846-8376
internetessentials.com

$9.95/month

- Located where Comcast offers service
- Have a child eligible for the National School Lunch Program
- Have not used Comcast within 90 days
- No overdue Comcast bill or equipment

CenturyLink™
Internet Basics

866-706-8592
centurylink.com/internetbasics

$9.95/month

- Located where CenturyLink offers service
- Qualify for the Lifeline/TAP phone service program (call **800-366-8201** to see if you qualify)
- Have not used CenturyLink within 90 days
- No overdue CenturyLink bill or equipment

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everyoneon
Low Cost Internet Database

everyoneon.org

Price varies

- Type in your zip code to see offers for low-cost internet, computers, and classes in your area.

USI Wireless™
Minneapolis Internet

952-253-3262
usiwireless.com

$19.95/month (can pay more for faster speeds)

- Any Minneapolis resident who lives in the coverage area
- Can rent modem, buy modem, or use your own compatible one

SAINT PAUL PUBLIC LIBRARY
Borrow the Internet

sppl.org/borrowtheinternet

Free

- Have a Saint Paul Public Library card
- Do not owe more than $10 in library fines
- Loan period is 3 weeks for a Clear Stick or a Clear Hub

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Mobile Hot Spot
Shared Mobile Internet
Great for on-site event registrations, study groups on the move and community-based training.

USB Modem
Mobile Internet
Basic mobility for everyone.

Desk Modem
Broadband Internet
Ideal for small workgroups and homes.

Just plug the USB Modem into any standard USB port on your laptop computer to get online anywhere Mobile Citizen has coverage. This portable device fits in your pocket for the ultimate in mobility.

The Mobile Hot Spot creates your own personal, secure WiFi network. Small enough to fit in your pocket, our Hot Spot allows groups of up to 8 to connect their laptops, mobile phones, smart phones or other WiFi-enabled devices.

The Desk Modem with WiFi gives you a set hotspot, connecting up to 8 WiFi-enabled devices to the Internet. Just plug it in so staff in a small office or conference room, or a family in their home can do planning, research, homework or training.

Sales tax will be added for organizations that are not tax-exempt.

Mobile Profile: Feeding America
A dollar saved on mobile Internet provides eight meals.

Feeding America's mission is to feed the hungry through a nationwide network of more than 200 food banks serving all 50 states, the District of Columbia and Puerto Rico. Through food pantries, soup kitchens and other agencies, Feeding America helps secure and distribute more than 3 billion pounds of food and grocery products annually with a highly mobile staff. In fact, approximately one-third of Feeding America's national office staff are on the go, working with food banks, agencies and advocates on the road to raise awareness of the issue of hunger in the United States. And with all those devices and all that mobility, mobile Internet costs were adding up. Feeding America Senior Vice President Kevin Lutz looked at the organization's mobile Internet bills and realized he could save 75% by working with Mobile Citizen, a low-cost mobile Internet provider for nonprofits.

"Our research shows that for every dollar raised, we can provide eight meals to the people we serve. That also means for every dollar saved by reducing our mobile Internet costs, that's money that can go to help feed someone in need in our community — and that is our ultimate goal."

KEVIN LUTZ
Feeding America

Contact us today to get started!

📞 877.216.9603   ✉ customerservice@mobilecitizen.org   🔗 mobilecitizen.org

Mobile Citizen is an initiative of voqal (voqal.org), an organization that empowers educators and the alternative media to promote progressive social change through digital philanthropy. Mobile Citizen was created via a unique, 30-year partnership agreement with CLEAR that allows us to offer cutting-edge mobile Internet service exclusively to nonprofits and schools.

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PCs for People's 4G High Speed Low Cost Internet

High Speed Low Cost Internet

No Credit Check		No Contract		No Hidden Fees

Step 1: Choose Your Modem (3 months free)

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Price	$60	$60
Mobile/Portable	Yes	No – Needs an Outlet
Wi-Fi Support	Yes	Yes
Number of Devices	1 USB, 8 Wireless	2 Wired, 8 Wireless
Recommend for a Desktop	Yes – with USB cord	Yes
Portable with a Laptop	Yes	No

*3 Months free with all new modems. Additional time can be added at the rates below.

Step 2: Add Time to Your Plan

	3 Months	6 Months	9 Months
Speed	4G Internet	4G Internet	4G Internet
Total Price/Fees	$13.33 per month	$12.50 Per Month	$10 Per Month
Data Limit	Unlimited	Unlimited	Unlimited
Speed Throttle	Never	Never	Never
Total	$40	$75	$90

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